



FUEL CELL GLOSSARY

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EXHIBIT A

Fuel Cell Glossary

RELIABILITY.

The ability of an item to perform a required function under stated conditions for a stated period of time.

RELIABILITY, ASSESSED.

The probability that a device will function without failure over a specified time period or amount of usage.

REVERSIBLE FUEL CELL.

A type of fuel cell in which the chemical reactants undergo reversible reactions, such that the cell may be recharged with a separate power source if desired. For example, the hydrogen/oxygen fuel cell may be recharged by providing power for water electrolysis with hydrogen storage. Also called a Regenerative Fuel Cell.

RIPPLE CURRENT.

The undesirable AC (ripple) component of a pulsating DC current produced by a rectifier or similar power conditioning device.

ROTOR MEMBER, NONDISPLACEABLE.

A valve member which cannot be moved from its seat by a force applied to the valve handle, or force applied by a plane surface to any exterior portion of the valve.

RUPTURE MEMBER.

A device that will automatically rupture at a predetermined pressure.

SAFETY-CONTROL CIRCUIT. See CIRCUIT, SAFETY-CONTROL.**SCHEDULED OUTAGE.**

An outage that results when a power plant is deliberately taken out of service at a selected time, usually for the purposes of construction, maintenance or repair.

SCHEDULE OUTAGE DURATION.

The period from the initiation of a scheduled outage until construction, preventive maintenance, or repair work is completed and the affected component is made available to perform its intended function.

SELECTIVE OXIDATION. See PREFERENTIAL OXIDATION.**SELF-CONTAINED.**

Having all essential working parts, except energy and control connections, so contained in a case or framework that they do not depend on equipment or fastenings outside of the machine.

SEPARATOR PLATE.

A solid piece of electrically conductive material (usually a metal or graphite) that is inserted between cells in a stack.

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BASE.

The lowest frame or structure of the appliance, exclusive of legs that provides the primary means of support.

BASE LOAD.

The constant electrical demand by a system to a power supply.

BEARING, OILLESS.

A sleeve bearing of porous material that depends solely on the porosity of the metal to store oil.

BIPOLAR PLATES.

Conductive plate in a fuel cell stack that acts as an anode for one cell and a cathode for the adjacent cell. The plate may be made of metal or a conductive polymer (which may be a carbon-filled composite). The plate usually incorporates flow channels for the fluid feeds and may also contain conduits for heat transfer.

BLACK START.

A power source's ability to power up from a cold shut down condition to fully operational status through a dedicated auxiliary power source that is totally independent of external systems.

BLOWDOWN.

The difference between the opening and closing pressures of a relief/safety valve.

BLOWER.

A fan used to force air and/or gas under pressure.

BOOST REGULATOR.

Voltage conversion device used to raise the voltage in a DC system.

BRITISH THERMAL UNIT.

The mean British Thermal Unit (BTU) is 1/180 of the heat required to raise the temperature of one pound (1lb) of water from 32°F to 212°F at a constant atmospheric pressure. It is about equal to the quantity of heat required to raise one pound (1 lb.) of water 1°F.

BURNER.

A device for the final conveyance of the gas, or a mixture of gas and air, to the combustion zone (also see Main Burner).

Forced-Draft. A burner for which air for combustion is supplied by a fan ahead of the gas utilization equipment.

Induced-Draft. A burner which depends on the draft induced by a fan beyond the gas utilization equipment for its proper operation.